

REMARKS

In the Office Action under reply, the Examiner has rejected claims 48, 50, 56, 57, 59, 51, 65-67, and 76-78 as follows:

1. Under 35 U.S.C. §112, first paragraph, as containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors had possession of the claimed invention at the time the application was filed (claims 48, 50, 59, 65-67, and 76);
2. Under 35 U.S.C. §102(b) as anticipated by Norman (claims 48, 50, 59, and 76); and
3. Under 35 U.S.C. §103(a) as obvious over Vesely (claims 48, 50, 56, 57, 61, 77, and 78).

Additionally, the Examiner has indicated that the subject matter of claims 54, 55, 60, and 62 is allowable if the claims were rewritten to place them in independent format. The Examiner has also objected to various sections of the specification and to the Abstract.

With the above amendments, claims 50, 56, 57, 78, and 79 have been cancelled and claims 48, 59, 61, and 65-67 have been amended. Thus, claims 48, 54, 55, 59, 60-62, 65-67, and 76 remain pending in the application.

The Examiner's rejections and objections are addressed, in part, by the above-amendments and are otherwise traversed by the arguments presented below.

THE AMENDMENTS TO THE SPECIFICATION

The Abstract has been amended to reflect the structure of the claimed compounds.

The objected to reaction schemes have been either corrected or deleted from the specification.

Tables 1, 2, and 6 have been amended to correct various informalities.

No new matter has been entered by way of these amendments to the specification.

THE AMENDMENTS TO THE CLAIMS

Claim 48 has been amended to specify that R_2 is isopropyl and to specify that R_3 is NR_4R_5 in which

- (i) R_4 is hydrogen and R_5 is lower alkyl substituted with amino or
- (ii) R_4 and R_5 are both lower alkyl substituted with one, two or three groups chosen from hydroxy and amino.

This amendment effectively incorporates several of the limitations found in the previously pending claims, particularly those claims indicated by the Examiner to be allowable. Thus, support for these amendments can be found in claims 54, 57, etc. The Examiner will note that the second proviso has been removed from the claim.

To avoid redundancy, claims 65-67 have been amended to remove redundant language and claims 56, 57, 78, and 79 have been cancelled. Cancellation of these claims is without prejudice, without intent to abandon any previously claimed subject matter, and without intent to acquiesce in any rejection of record.

Claims 54, 59, 61, and 65 have been amended so that they correctly depend from claim 48 and correspond to the above-discussed amendments made to claim 48.

Claim 61 has also been amended to specify that R_1' is aryl, substituted aryl, heteroaryl, substituted heteroaryl, or heterocyclyl. The newly amended claim now recites a subgroup of the elements recited in independent claim 48 and therefore support for the amendment may be found therein.

No new matter has been added to the application by way of these specification and claim amendments.

THE WRITTEN DESCRIPTION REJECTION UNDER 35. U.S.C. §112, FIRST PARAGRAPH:

The Examiner has rejected claims 48, 50, 59, 65-67, and 76 over 35. U.S.C. §112, first paragraph, as lacking written description in the specification. Specifically, the Examiner has referenced the second proviso that was previously introduced into independent claim 48. As claim 48 has been amended to remove the aforementioned proviso, Applicants submit that the Examiner's rejection is moot and its reconsideration and withdrawal of the rejection are requested.

THE REJECTION UNDER 35 U.S.C. §102(B) OVER NORMAN:

Claims 48, 50, 59, and 76 have been rejected over Norman. The Examiner has based his rejection on the supposition that the second proviso that was contained in a previous version of claim 48 failed to have supporting disclosure in the grandparent application and, therefore, the claim was not entitled to the filing date of the grandparent application.

Given that the proviso referenced by the Examiner has been deleted from the claims, the presently pending claims are entitled to the August 2, 1996, priority date of the grandparent application, now U.S. Patent No. 5,866,702. Norman, as discussed in a previous response, was not available to the public until August 7, 1996, as confirmed with The Journal of the American Chemical Society. Given this fact, Norman is not properly cited as 102(b) prior art and the rejection is in error. Reconsideration and withdrawal of the rejection are in order and are earnestly requested.

THE REJECTION UNDER 35 U.S.C. §103(A) AS OBVIOUS IN VIEW OF VESELY:

Claims 48, 50, 56, 57, 61, 77, and 78 have been rejected as unpatentable over Vesely. As claims 50, 56, 57, and 78 have been cancelled, the rejection, as it pertains to them, is now moot. The Examiner, while acknowledging that the compounds in Vesely do not anticipate the presently claimed invention, asserts that the presently claimed compounds are homologues of the compounds disclosed in Vesely and, therefore, the close structural similarity is sufficient to show obviousness. Applicants disagree.

As amended, independent claim 48 specifies 2,6,9-trisubstituted purines which are amine substituted in the "2" position. Specifically, claim 48 requires that the 2-amino group be either di-substituted with hydroxy-or amino-substituted lower alkyl chains or mono-substituted with an amino-substituted lower alkyl group.

In contrast to the compounds described by claim 48, the 2-amino purines disclosed in Vesely are either

- (1) unsubstituted, i.e., 2-amino,
- (2) mono-substituted with
 - (a) an unsubstituted lower alkyl chain, i.e., 2-methylamino,
 - (b) a hydroxy-substituted lower alkyl chain, i.e., 2-hydroxyethylamino, or
 - (c) a di-substituted amino-substituted lower alkyl chain, i.e., 2-dimethylaminoethylamino.

Neither di-substituted 2-amino groups nor mono-substituted 2-aminoalkylamino groups are disclosed in the reference.

As primary, secondary and tertiary amino group are not homologues by any understanding, the substitution of the mono-substituted 2-amino moieties disclosed by Vesely with the di-substituted 2-amino moieties of the presently pending claims can in no way be seen as an obvious substitution. Similarly, replacement of the

dimethylaminoethylamino group of compound 60 in Vesely with the primary 2-aminoalkylamino groups of the current claims is also non-obvious.

Applicants believe that the Examiner is already aware of these differences as claims drawn to di-substituted amino groups and aminoalkylamino groups were indicated as allowable. Given the clear differences in structure and function of the 2-amino moieties, the claimed compounds are not homologues to those compounds taught in Vesely and are not, therefore, obvious in view of those compounds. Reconsideration and withdrawal of the rejection are in order and are respectfully requested.

CONCLUSION

For the foregoing reasons, applicant submits that the claims comply with the requirements of 35. U.S.C. §§112, 102(b), and 103(a) and are in condition for allowance. A Notice of Allowance is requested, and a prompt mailing thereof would be much appreciated.

Should the Examiner have any questions regarding this amendment, he or she is welcomed to contact the undersigned attorney at (650) 384-8755. Applicants respectfully request that all further communication be sent to the undersigned attorney at the following address:

CV Therapeutics, Inc.
3172 Porter Drive
Palo Alto, CA 94304

Respectfully submitted,

Date: 2/25/04

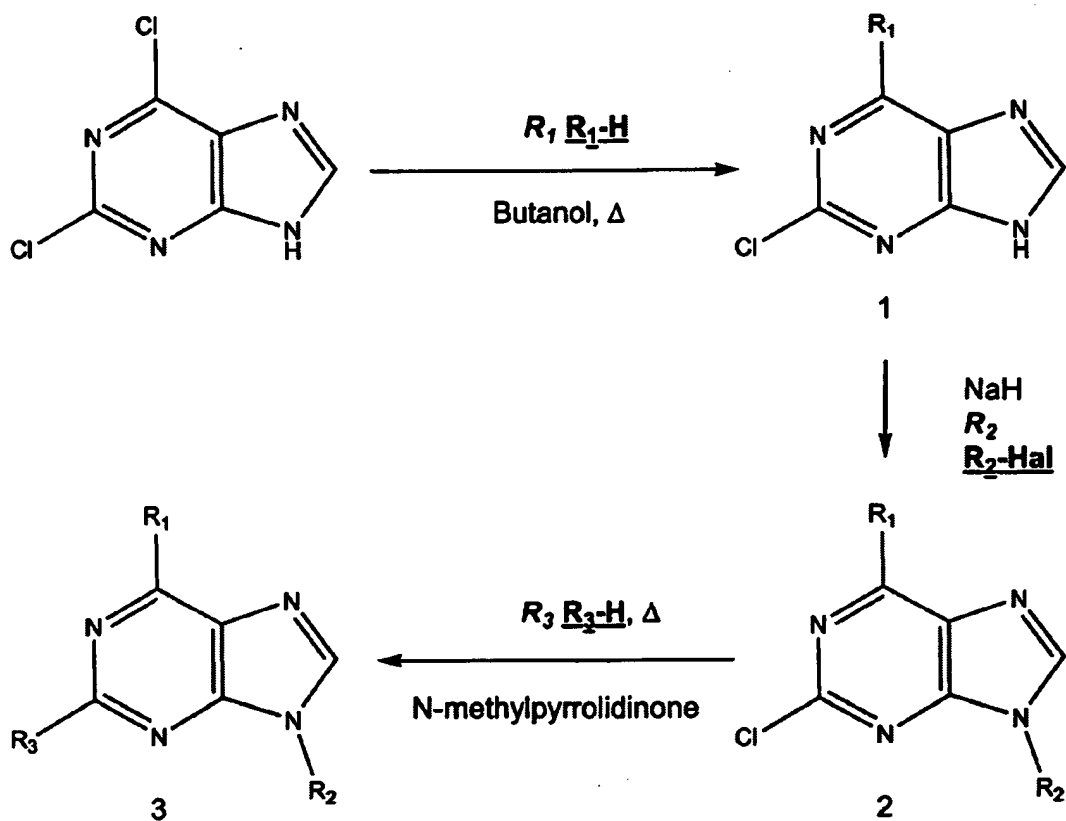
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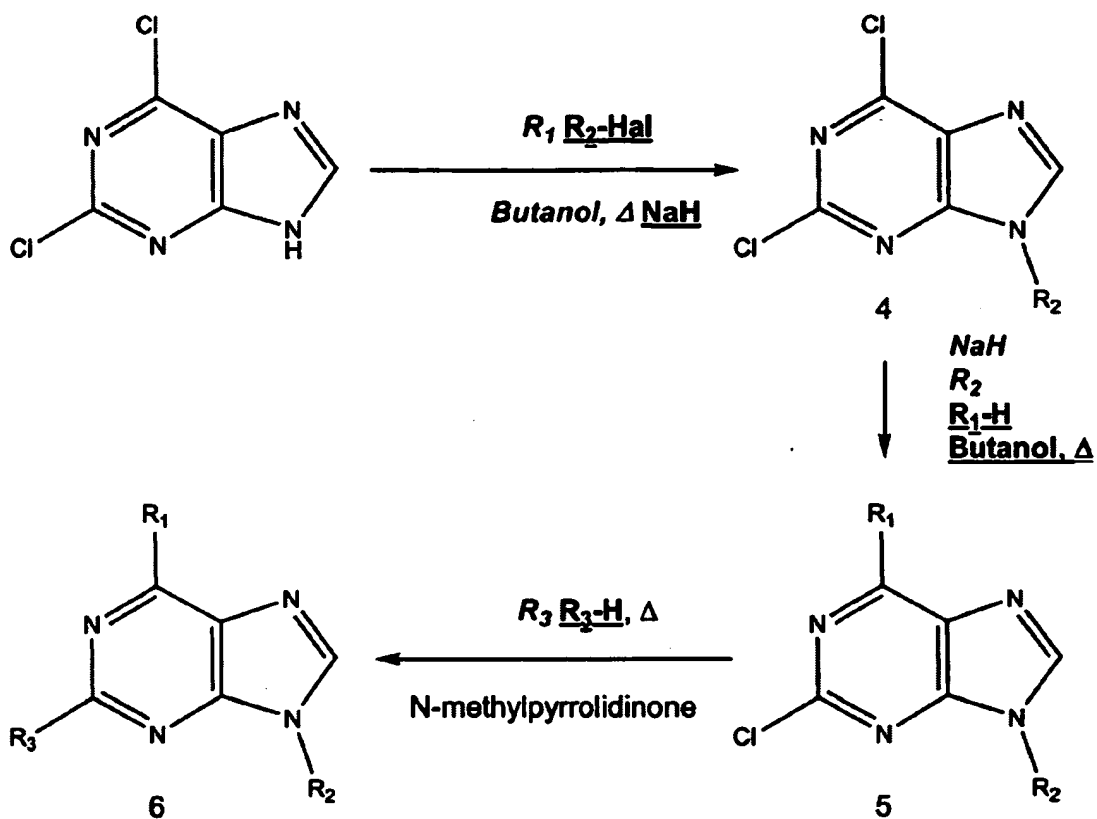
Marked Up Replacement Scheme
Example 1, Page 19, Line 9

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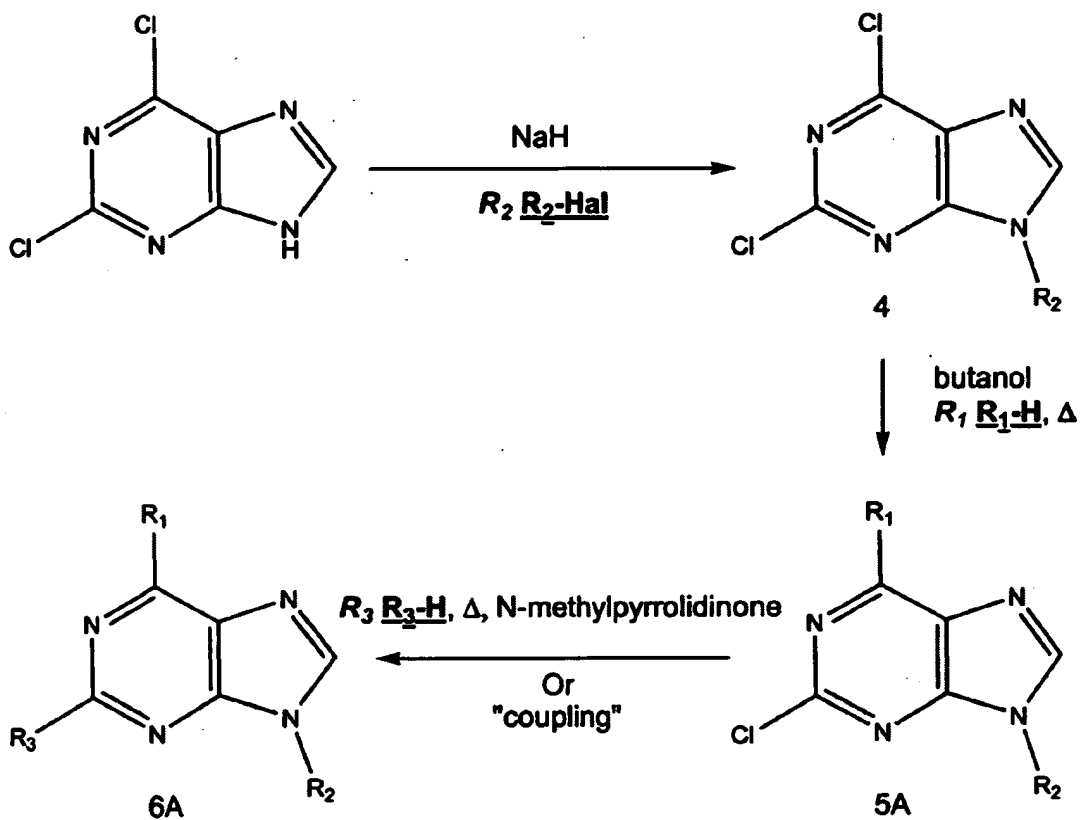
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Example 2, Page 32, Line 4

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Example 3, Page 36, Line 7

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Example 5, Page 43, Line 4

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